Rilsan® RDG 179

Polyamide 11

Arkema

Message:

Rilsan® RDG 179 is a high molecular weight polyamide-11 pipe-grade resin developed to allow good dimensional control during pipe extrusion. RDG 179 is a heat and light stabilized, yellow grade of Rilsan polyamide 11 intended for use as high pressure natural gas distribution pipe. Rilsan RDG 179 is available in either 44 lb. foil lined bags or 1000 lb. foil lined containers to prevent moisture absorption during shipping, storage and handling.

General Information			
Additive	heat stabilizer UV stabilizer		
Features	Good dimensional stability High molecular weight Good UV resistance Updatable resources Thermal Stability		
Uses	Piping system		
Appearance	Yellow		
Forms	Particle		
Processing Method	Pipeline extrusion molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.03	g/cm³	ASTM D1248
Water Absorption			Internal method
23°C, 24 hr, 50% RH	0.20	%	Internal method
Saturation	1.9	%	Internal method
Equilibrium, 23°C, 50% RH	0.80	%	Internal method
Intrinsic Viscosity	1.5 - 1.7	dl/g	Internal method
Fundamentals of Hydrostatic Design			ASTM D2837
23°C	17.2	MPa	ASTM D2837
60°C	11.0	MPa	ASTM D2837
80°C	8.62	MPa	ASTM D2837
Hoop Stress	51.7	MPa	ASTM D1599
Hydrogen (H2) Gas Permeation (23°C)	0.0698	cm³·cm/cm²/sec/bar	Internal method
Methane (CH4) Gas Permeation (23°C)	0.00220	cm³·cm/cm²/sec/bar	Internal method
PENT [1]	3000	hr	ASTM F1473
S4 Critical Pressure (0°C)	0.552	MPa	ASTM F1589
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength			
Yield [2]	51.0	MPa	ASTM D2290

Yield	39.3	MPa	ASTM D638
Fracture [3]	40.0	MPa	ASTM D2290
Fracture	42.7	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield	14	%	ASTM D638
Fracture	240	%	ASTM D638
Flexural Modulus	1240	MPa	ASTM D790
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	145	°C	ASTM D648
1.8 MPa, not annealed	50.0	°C	ASTM D648
CLTE - Flow			ASTM D696
-30 to 50°C	8.5E-5	cm/cm/°C	ASTM D696
10 to 49°C	1.5E-4	cm/cm/°C	ASTM D696
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+14	ohms	ASTM D257
Volume Resistivity	1.0E+14	ohms·cm	ASTM D257
Additional Information	**Nominal Value**	**Unit**	**Test Method**

Testing was performed on die cut samples from 2" SDR 11 extruded pipe produced under laboratory controlled conditions. Three sets of sample pipe was produced. The samples were chosen to span the resin manufacturing range of RDG 179. The raw data indicates that all samples from the three different sets are from the same population.

Extrusion	**Nominal Value**	**Unit**
Suggested Max Moisture	0.060	%
Melt Temperature	227 - 249	°C

NOTE	
1.	No failures @ 80°C/2.4 MPa stress
2.	Apparent Tensile Strength
3.	Apparent Tensile Strength

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China


WECHAT